

Fig. 1

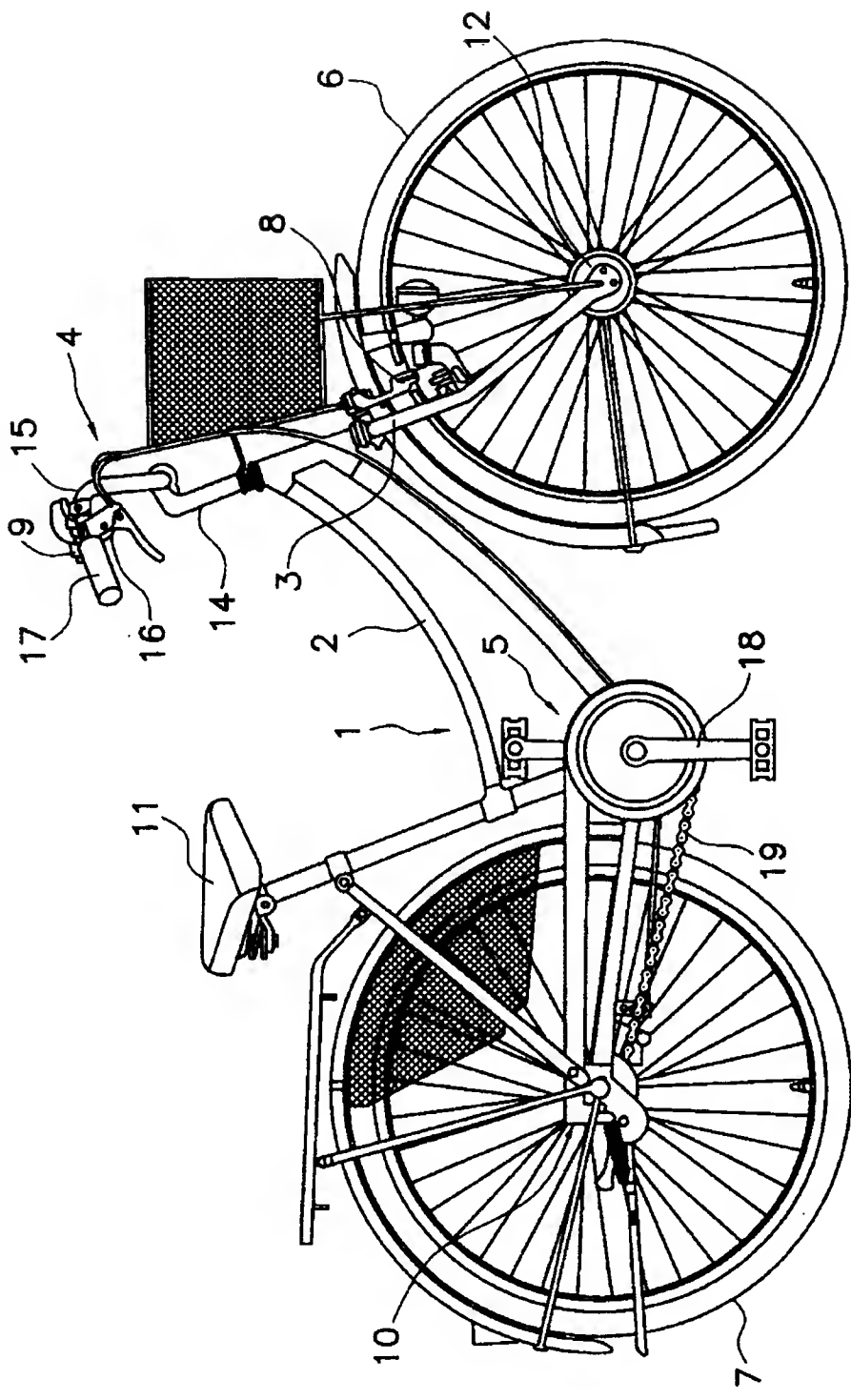
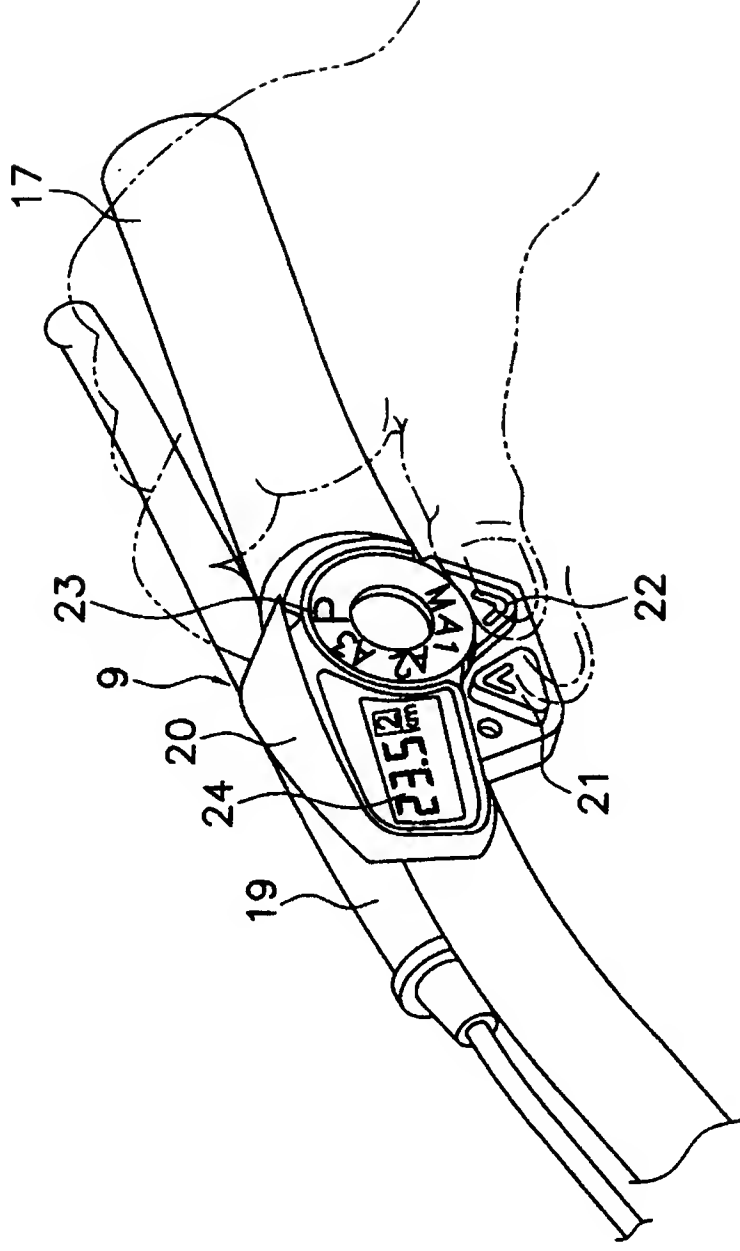


Fig. 2



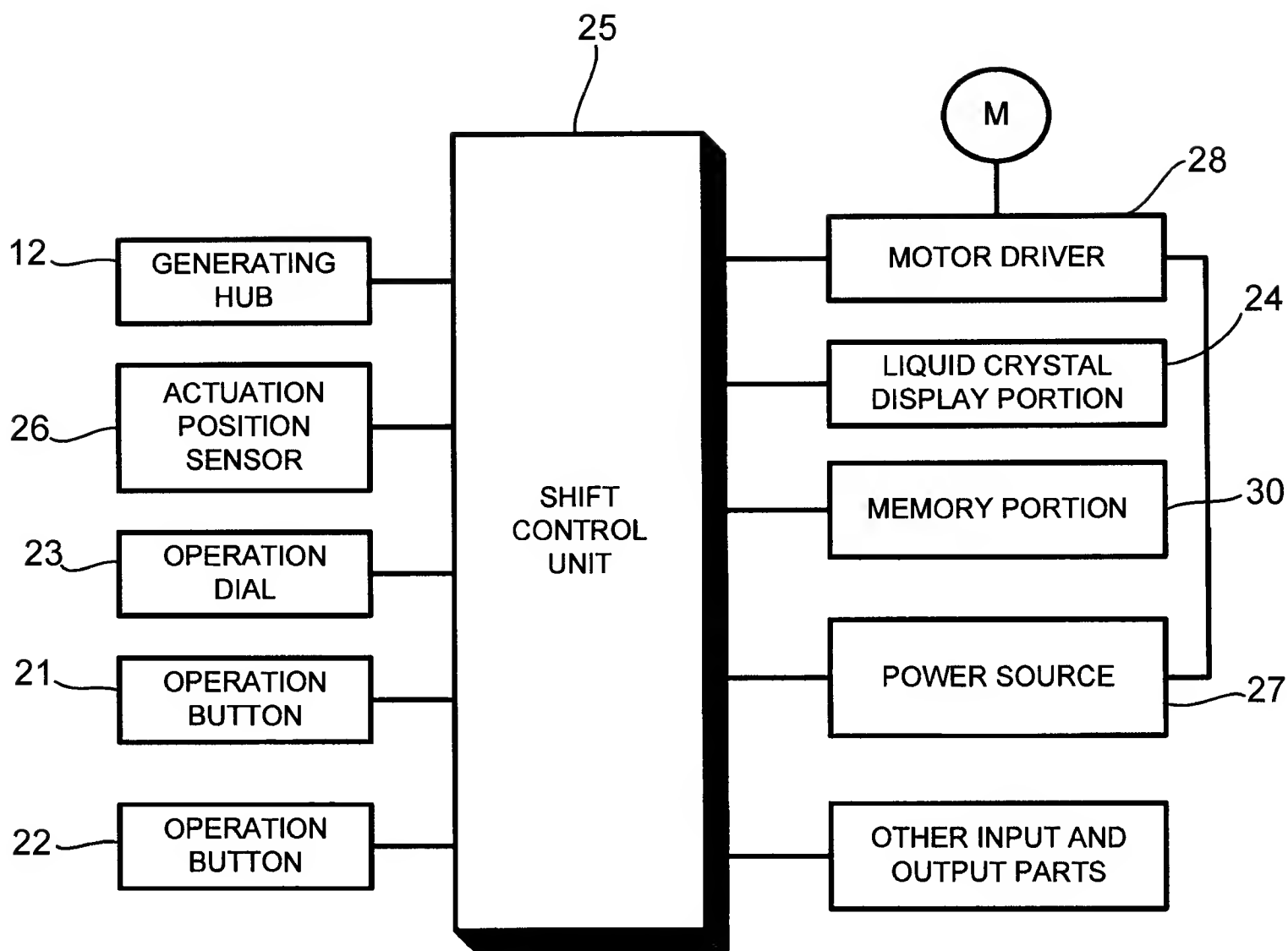


Fig. 3

# Fig. 4

SHIFT LEVEL	UPSHIFTING PERIOD (U) (ms)		2 <sup>ND</sup> DOWNSHIFTING PERIOD (D2) (ms)		1 <sup>ST</sup> DOWNSHIFTING PERIOD (D1) (ms)	
1	43.5	U (1)	0	D2 (1)	0	D1 (1)
2	30.1	U (2)	45.8	D2 (2)	48.3	D1 (2)
3	255	U (3)	31.7	D2 (3)	33.4	D1 (3)

# Fig. 5

	RATE OF ROTATION OF CRANK IMMEDIATELY BEFORE SHIFTING (rpm)	NUMBER OF DETERMINATIONS	DECISION TIME (s)	PULSATION PERIOD (s)
D2 (3)	42.5	20	0.72	0.71
D1 (3)	30	1	0.05	1
D2 (2)	42.5	15	0.74	0.71
D1 (2)	30	1	0.07	1
U (2)	60	15	0.52	0.5
U (1)	60	11	0.52	0.5

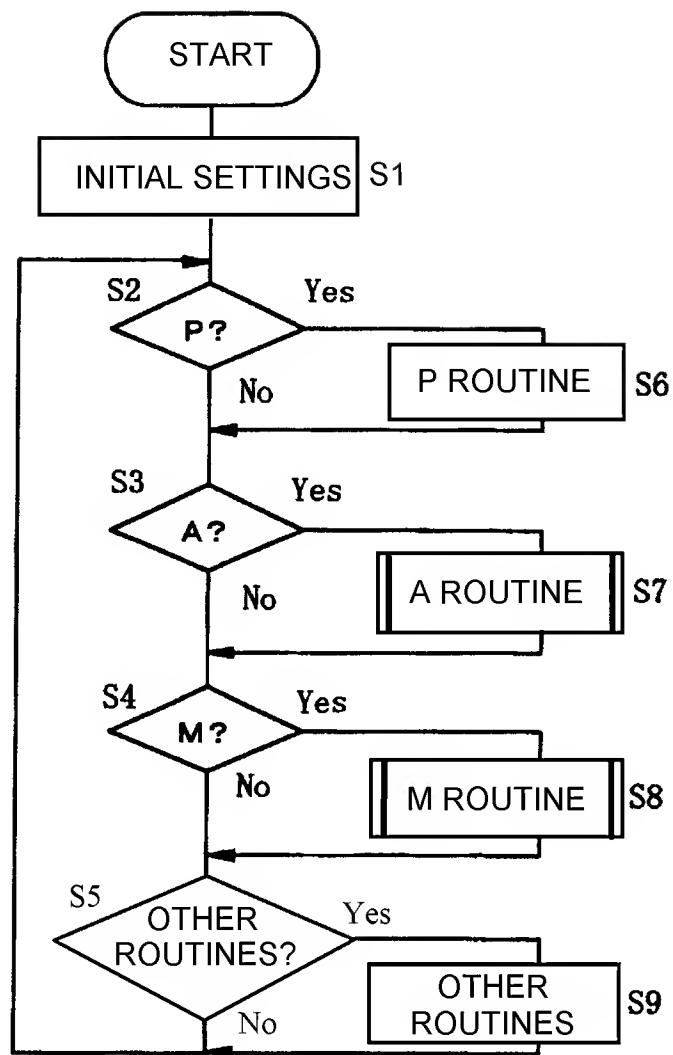
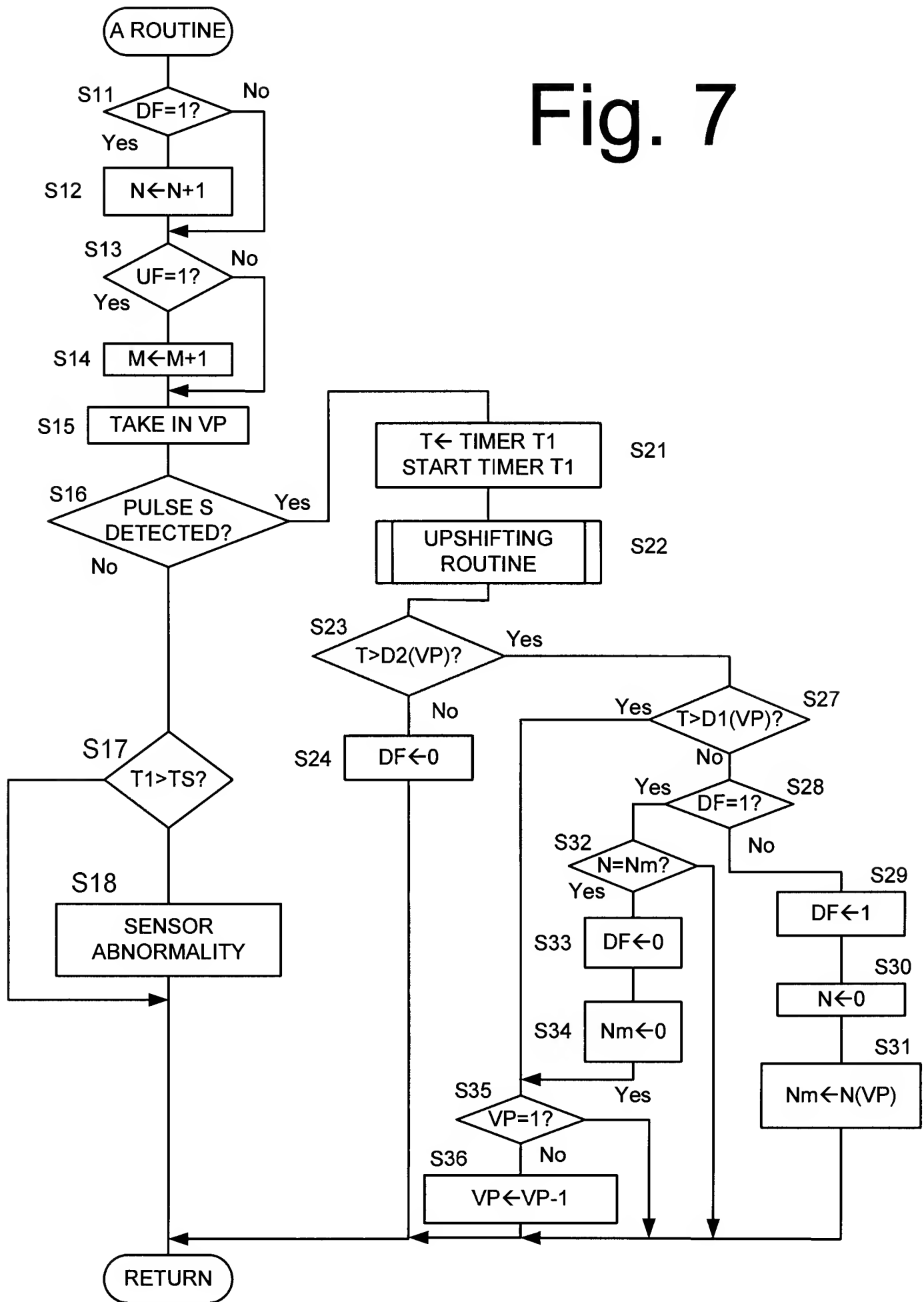


Fig. 6

# Fig. 7



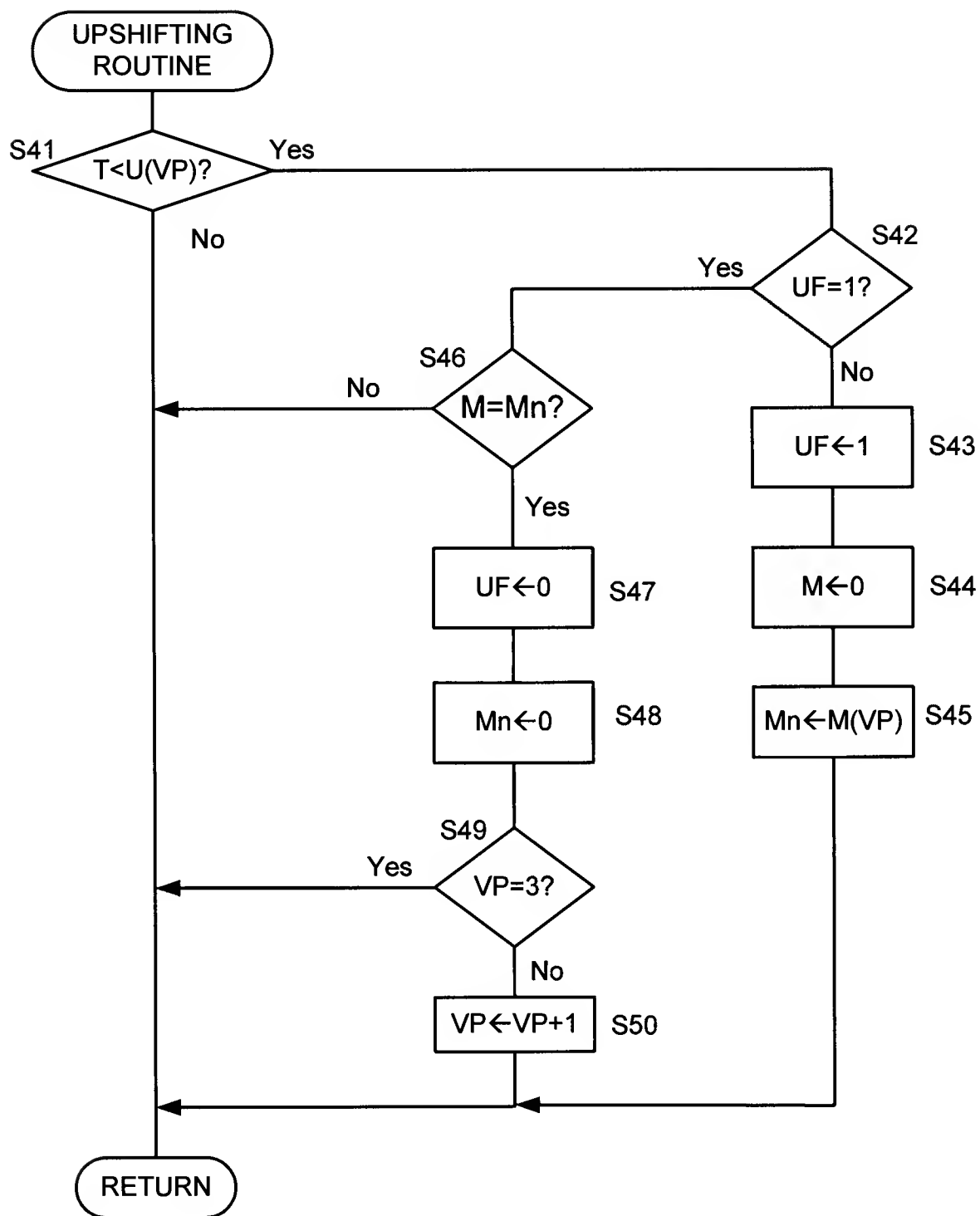


Fig. 8

# Fig. 9

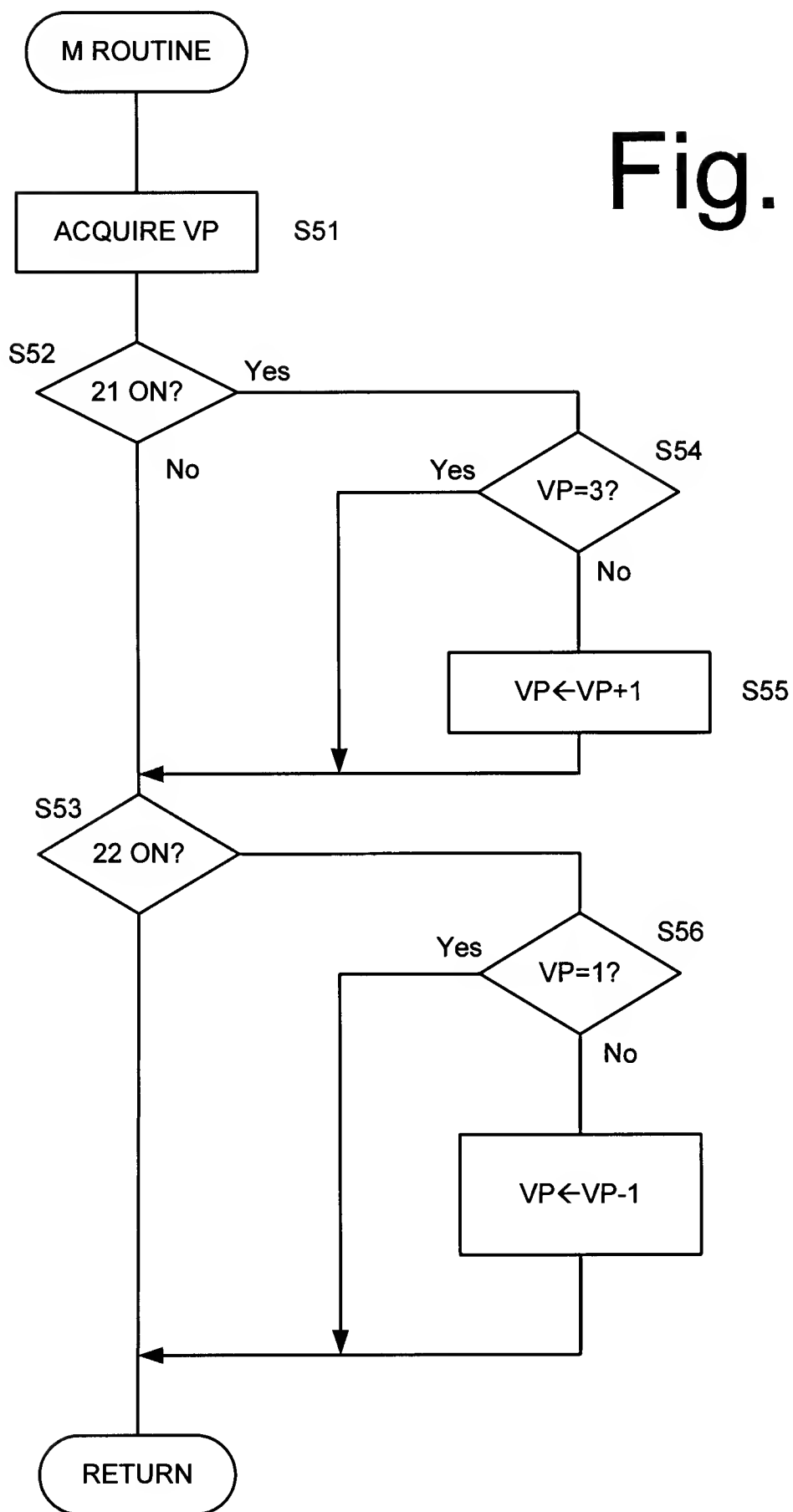




Fig. 10(A)

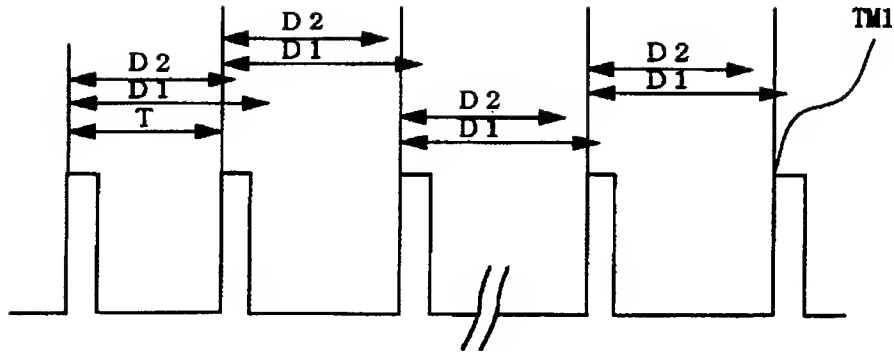


Fig. 10(B)

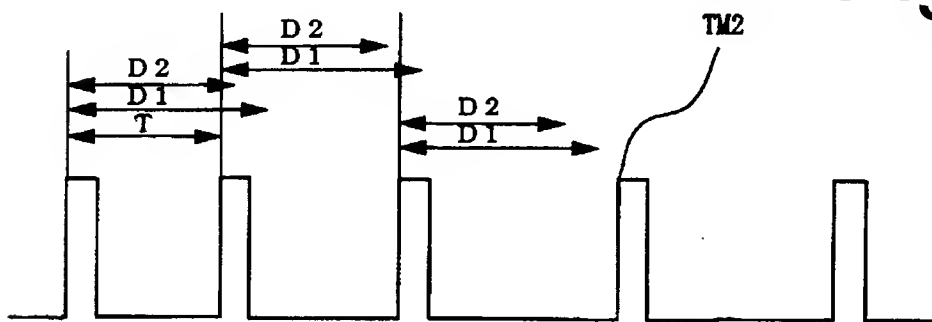


Fig. 10(C)

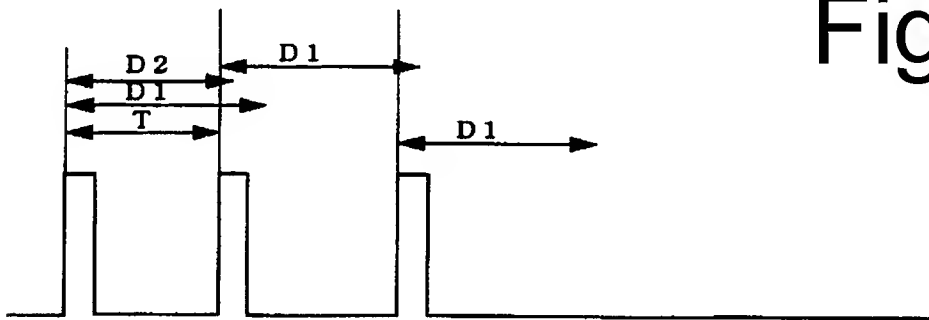


Fig. 11

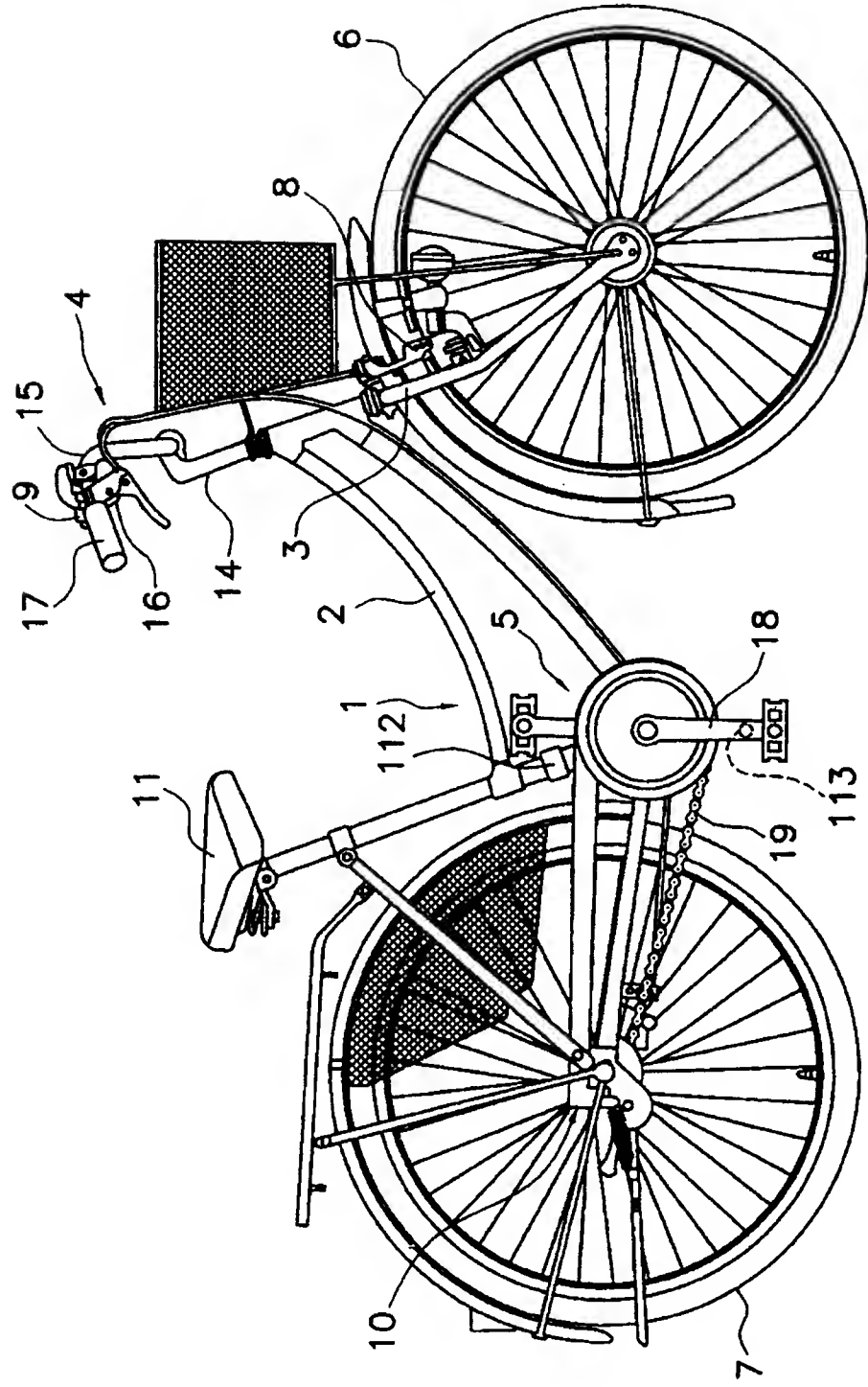


Fig. 12

SHIFT LEVEL	UPSHIFTING PERIOD (U) (ms)	2 <sup>ND</sup> DOWNSHIFTING PERIOD (D2) (ms)	1 <sup>ST</sup> DOWNSHIFTING THRESHOLD VALUE (D1) (ms)
1	0.92	U (1)	0
2	0.92	U (2)	2
3	700	U (3)	2

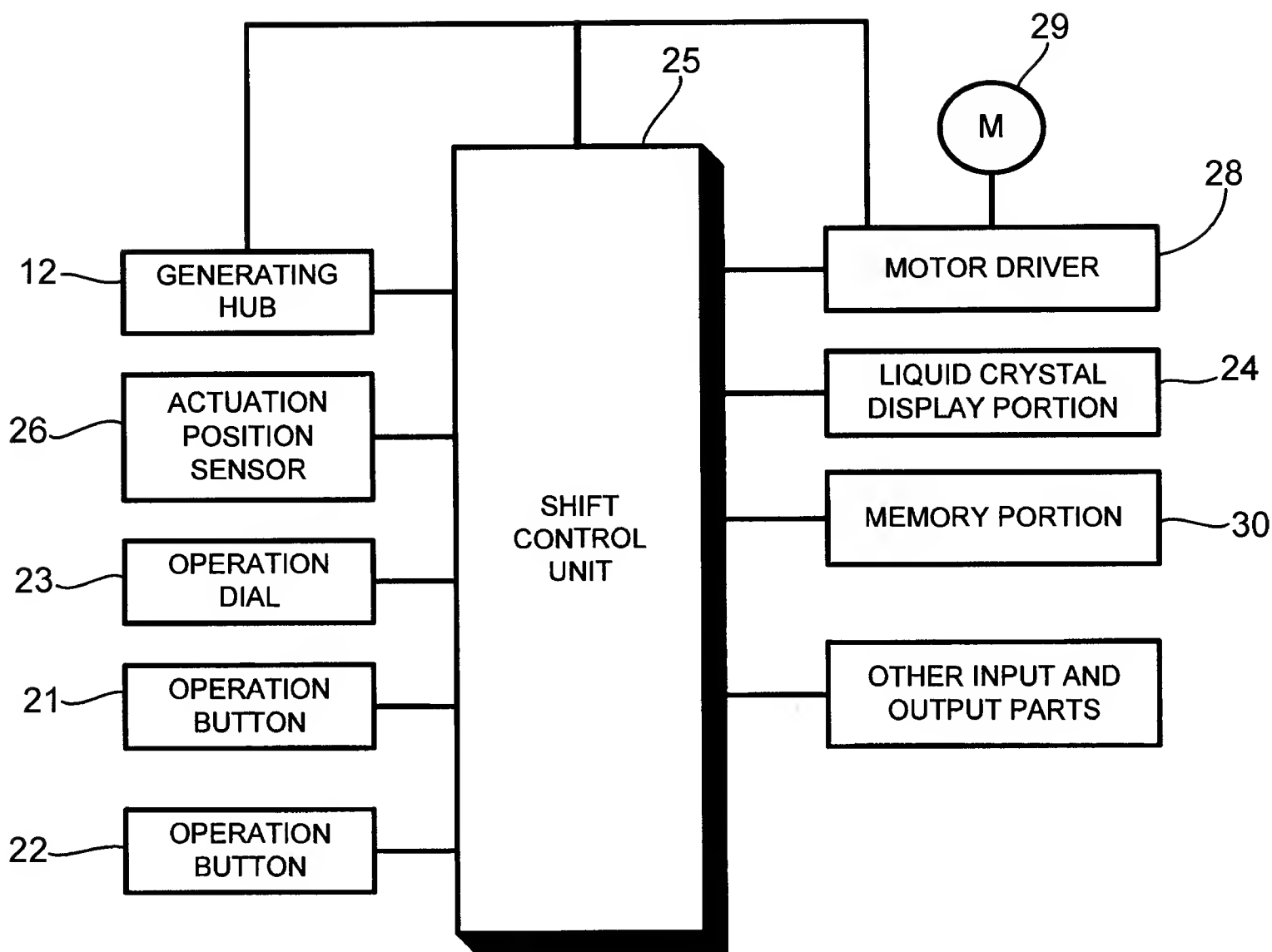


Fig. 13